

CLAIMS

1. A method of transfecting dendritic cells comprising:  
providing dendritic cells;  
providing a transfection agent comprising a polynucleotide and  
microparticles, said microparticles comprised of biodegradable polymer and cationic  
detergent; and  
incubating the dendritic cells and transfection agent for a time sufficient to  
transfect the dendritic cells with the polynucleotide.

2. The method of claim 1, wherein the dendritic cells originate from bone  
marrow.

3. The method of claim 1, wherein the dendritic cells originate from blood.

4. The method of claim 1, wherein the dendritic cells originate from a  
vertebrate subject.

5. The method of claim 1, wherein the dendritic cells are from a human  
subject.

6. The method of claim 1, wherein the cationic detergent comprises CTAB.

7. The method of claim 1, wherein the cationic detergent comprises  
cetrimide.

8. The method of claim 1, wherein the polymer is a poly( $\alpha$ -hydroxy acid).

9. The method of claim 1, wherein the polymer is a poly(lactide).

10. The method of claim 1, wherein the polymer is a copolymer of D,L-  
lactide and glycolide or glycolic acid.

1 11. The method of claim 1, wherein the polymer is a poly(D,L-lactide-co-  
2 glycolide).

1 12. The method of claim 1, wherein the polymer is a copolymer of D,L-  
2 lactide and caprolactone.

1 13. The method of claim 1, wherein the dendritic cells are cultured for about  
2 5 days prior to transfection.

1 *Jul 93* 14. The method of claim 1, wherein the dendritic cells are cultured for about  
2 10 days prior to transfection.

1 15. The method of claim 1, wherein the dendritic cells and transfecting agent  
2 are incubated for about 24 hours.

1 *Oct 94* 16. The method of claim 1, wherein polynucleotide is provided in the form  
2 of a plasmid.

1 17. The method of claim 1, wherein said polynucleotide encodes an antigen  
2 associated with a virus or a tumor.

1 18. The method of claim 17, wherein the antigen is associated with HIV,  
2 meningitis A, meningitis B, or meningitis C.

1 19. A method for producing an immune response comprising administering,  
2 to a vertebrate subject in need thereof, an effective amount of dendritic cells  
3 produced by the method of claim 17.

1 20. The method according to claim 19, in which the dendritic cells originate from  
2 the vertebrate subject.

1           21. The method according to claim 19, in which the dendritic cells originate  
2           from a healthy vertebrate subject MHC-matched to the vertebrate subject.

1           22. The method according to claim 19, in which the dendritic cells are  
2           administered parenterally.

1           23. The method according to claim 19, in which the dendritic cells are  
2           administered by direct injection into affected tissue.

1           24. A method for producing an immune response in a vertebrate subject in  
2           need thereof comprising:  
3           providing T cells;  
4           activating said T cells by subjecting them to the dendritic cells produced by  
5           the method of claim 17; and  
6           administering said activated T cells to said subject.

1           25. The method according to claim 24, in which the dendritic cells and T  
2           cells originate from the vertebrate subject.

1           26. The method according to claim 24, in which the dendritic cells and T  
2           cells originate from a healthy vertebrate subject MHC-matched to the vertebrate  
3           subject.

1           27. The method according to claim 24, in which the T cells are administered  
2           parenterally.

1           28. The method according to claim 24, in which the T cells are administered  
2           by direct injection into affected tissue.

1           29. Antigen presenting dendritic cells made by the method of claim 17.

